REMARKS

Reconsideration of the application, as amended, is respectfully requested.

I. STATUS OF THE CLAIMS

Claims 4-26 are currently pending. Claims 4-26 have been canceled herewith without prejudice. Moreover, new claims 27-39 have been added.

Support for the above amendments and new claims can be found throughout the specification as originally filed. No new matter has been added by virtue of this amendment.

II. 35 U.S.C. 103(a) REJECTIONS

(i) Claims 4-26 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6, 919,931 to Chae ("the Chae patent") in combination with U.S. Patent No. 6,524,663 to Kelly et al. ("the Kelly patent") and U.S Patent Application Publication No. US2003/0124259A to Kodas et al. ("the Kodas publication") and U.S. Patent No. 6,365,968 to Qian et al. ("the Qian patent").

As mentioned above, claims 4-26 have been canceled herewith without prejudice. Thus, the above rejections to these claims is now moot.

In addition, it is submitted that Chae, Kelly, Kodas and Qian alone or in combination each fail to teach or suggest all of the features recited in new claims 27, 30, 31, 36 and 38 for at least the reasons set forth below.

In particular, Chae fails to teach or suggest a method which includes utilizing a organometallic layer which when developed after being exposed to light through a photomask directly forms a final metal pattern, as recited in new claim 27 or a method (new claims 30 and 31) or thin film transistor array panel (new claims 36 and 38) which includes a organometallic layer which when developed after being exposed to light through a photomask thereby directly forms at least one of the gate wire, the data wire and the pixel electrode, as recited in new claims 30, 31, 36 and 38. The above statement regarding Chae's lack of teaching the above features is

clearly conceded by the Examiner in the instant Office Action. **(See 3 and 4 of the instant Office Action).**

Furthermore, Kelly cannot cure the above deficiencies of the Chae reference because the Kelly reference likewise at the very least fails to teach or suggest a method which includes utilizing a organometallic layer which when developed after being exposed to light through a photomask directly forms a final metal pattern, as required by new claim 27 or a method (new claims 30 and 31) or a thin film transistor array panel (new claims 36 and 38) which includes a organometallic layer which when developed after being exposed to light through a photomask thereby directly forms at least one of the gate wire, the data wire and the pixel electrode, as required by new claims 30, 31, 36 and 38.

In contrast, Kelly describes a method of forming a metal film by using an organometallic compound. However, the direct product made by the organometallic compound is only a surface activation film, i.e., a seed film for electroless plating. Thus, Kelly requires that additional steps, such as electroless plating be performed on the surface activation film before a final metal film is formed which can be used for wires, etc. As set forth below the Kelly reference discusses in relevant part:

"An activated substrate surface suitable for electronics and microsystems preparation is prepare ***by contacting the surface with a surface activation compound****, e.g. organometallic based on palladium, platinum, rhodium or iridium. The photo labile ligand has an optical absorption band which overlaps with the wavelength of the UV. A UV lamp is used, in combination with a mask,* ***to selectively irradiate the contacted surface****. Irradiation of the surface with light of a suitable wavelength decomposes the organometallic compound to the activating metal.* ***The surface is then ready for electroless plating with the desired conducting material****. The mask is patterned to delineate areas where surface activation is not to occur. The organometallic compound absorbs ultraviolet radiation in the wavelength range 210-260 nm, or in the wavelength range 290-330 nm, in the solid state if the compound exists as a solid at 25° C. or in the liquid state if the compound exists as a liquid at 25° C.* ***(See the Abstract of the Kelly reference).***

Electroless plating has yielded good quality results, and has the advantage that it can be used to plate electrical insulators and electrical semiconductors as well as electrical conductors, but is expensive because it involves a large number of steps. In particular, ***electroless plating selectively on some parts of a substrate only involves preparing a patterned surface activation film on the substrate to initiate the subsequent electroless reaction. The current technique for producing a patterned surface activation film on an substrate for receiving a layer of conducting material in a subsequent electroless plating step*** *comprises the steps of: a) preparing a solution of the film compound; b) forming a coating of the solution on the insulating substrate and allowing the solvent to evaporate so as to leave a film of the compound; c) covering the film with a patterned mask; d) irradiating the film through the patterned mask under vacuum conditions; e) rinsing the film whereby the non-irradiated parts are removed, leaving a patterned film."* ***(See Col. 1, lines 46-55 of the Kelly Reference).***

Accordingly, the surface activation film formed in Kelly is clearly not a final metal pattern as required by new claim 27 nor can the surface activation film of Kelly be used for gate wires, data wires or pixel electrodes as required by new claims 30, 31, 36 and 38. Rather, in Kelly, a final metal pattern or final metal film used for wires, etc. is formed by a subsequent step of electroless plating on the surface activation film.

In contrast to the Kelly reference, with exemplary embodiments of the present invention within the scope of claims 27, 30, 31, 26 and 38, the organometallic layer when developed directly forms a final metal pattern, as recited in claim 27 and the organometallic layer when developed also directly forms at least one of gate wires, data wires or pixel electrodes, as recited in claims 30, 31, 36 and 38. Therefore, for at least the reasons set forth above, the Kelly reference clearly does not teach or suggest using the same type of organometallic layer and/or the same method steps, as recited in claims 27, 30, 31, 36 and 38 and thus, the teachings of Kelly consequently fail to cure the above-mentioned deficiencies of the Chae patent.

Lastly, it is also noted that the Qian and Kodas references also fail to cure the above-mentioned deficiencies of the Chae and Kelly references because Qian and Kodas each likewise at the very least fail to teach or suggest a method which includes utilizing a organometallic layer which when developed after being exposed to light through a photomask directly forms a final

metal pattern, as required by new claim 27 or a method (new claims 30 and 31) or a thin film transistor array panel (new claims 36 and 38) which includes a organometallic layer which when developed after being exposed to light through a photomask thereby directly forms at least one of the gate wire, the data wire and the pixel electrode, as required by new claims 30, 31, 36 and 38.

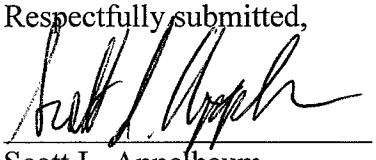
Accordingly, for at least the reasons set forth above, it is submitted that new claims 27-39 are patentable over Chae, Kelly, Kodas and Qian alone or in combination with one another.

III. CONCLUSION:

For the foregoing reasons, the present application is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully requested.

The Examiner is invited to contact the undersigned if he has any questions or comments in this matter.

Respectfully submitted,



Scott L. Appelbaum
Reg. No. 41,587
Attorney for Applicant

F. Chau & Associates, LLC
130 Woodbury Road
Woodbury, NY 11797
Tel: (516) 692-8888
Fax: (516) 692-8889